(b) if so, the reasons for such decline and the details thereof;

(c) whether it is also a fact that it has been due to non-availability of required apparatus and materials and less teaching hours; and

(d) if so, the action being taken by Government in this direction?

THE MINISTER OF STATE IN THE MINISTRY OF HUMAN RESOURCE DEVELOPMENT [DR. (SHRIMATI) RITA VERMA]: (a) to (d) There is no reported decline in the number of students in science courses at Senior Secondary stage. However, to encourage students to continue their education in basic sciences at higher education level, a scheme called "Kishore Vaigyanik Prothsahan Yojana" (KVPY) has been launched during 1999-2000 by Department of Science and Technology which targets the young science students at the school and college level. It aims to encourage the students of basic sciences, engineering and medicine to take up research career in these areas.

To improve the quality of science education and to promote scientific temper, funds are also provided to State Governments/UTs/Voluntary Organizations under a Centrally Sponsored Scheme, "Improvement of Science Education in School" which has been operational since 1987-88. Under the scheme, 100% assistance is provided to States/Union Territories for Provision of Science kits to Upper Primary Schools, Setting up/Upgradation of science laboratories, Library facilities in secondary/ senior secondary schools and training of science and mathematics teachers.

Growth of Biotech Industry

3259. SHRI PARMESHWAR KUMAR AGARWALLA: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether Government are aware that the estimated potential for growth of biotech industry is to the tune of US$ 4.5 billion, by the year 2010;

(b) if so, what are the details in this regard and how India's potential compares with that in the world;

(c) whether India has sufficient infrastructure and capability, to tap the potential; and

(d) if so, what steps are being taken to tap the potential, fully?

THE MINISTER OF STATE IN THE DEPARTMENT OF SCIENCE AND TECHNOLOGY IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI BACHI SINGH RAWAT): (a) Yes, Sir.

(b) As per a survey conducted by Confederation of Indian Industries (CII), the actual consumption of biotech products during 1999 was about US$ 1.78 billion and is projected to grow to US$ 4.27 billion by 2010. The area wise demand for the year 2010 has been projected as : human and animal health care products — US$1.7 billion; agriculture including seeds — US$1.4 billion; industrial products — US$978 million; and other products — US$ 145 million. Projection at global level for 2010 for biotech products have been estimated to be around US$50 billion and India is expected to have a market share of about 8%.

(c) and (d) Government of India has made concerted efforts to speed up research and development, application and commercialization of research leads. From Rs. 622 crore in Ninth Plan (1997—2002), an outlay of Rs. 1450 crore for the Tenth Plan (2002—07) has been allocated. Further impetus has been provided with the establishment of 62 bioinformatics centres, 25 state-of-the-art biotech facilities, Centres of Excellence and 64 postgraduate teaching programmes, establishment of a National Bioresource Development Board, new institutions like National Brain Research Centre, National Centre for Plant Genome Research and Institute of Bioresource and Sustainable Development in addition to many other national laboratories in frontier areas of biology and biotechnology. Significant achievements have been in obtaining research leads, transfer of technology, large-scale demonstrations and commercialization of products. Vaccines, diagnostic kits, drug delivery systems and bioremediation methods, tissue culture protocols, bio-fertilizers and biopesticides are at various stages of development and commercialization.

Also various incentives to the biotech through fiscal measures, custom and excise duty exemptions, tax holidays for R&D expenditure, encouraging Foreign Direct Investment (FDI), speedy clearance of FDI projects by Foreign Investment Promotion Board (FIPB), constitution of Fast Track Committee (FTC) under Foreign Investment Implementation Authority (FIIA) have been provided. To inculcate biotech industry in small-scale sector, a Task Force and a Biotechnology Cell have been created

in the Ministry of Small Scale Industries, Agro and Rural Industries in Association with Department of Biotechnology. A sensitization programme in the form of workshops has jointly been initiated for awareness building in SSI entrepreneurs.

Conference on Monsoon failure

3260. SHRI K. KALAVENKA A RAO: Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

(a) whether the Meteorological Department of India held a conference of weather experts in November, 2002, to study the causes for failure of this year's Monsoon in the country;

(b) if so, what are the details in this regard; and

(c) whether experts from foreign countries also participated in this conference?

THE MINISTER OF STATE IN THE DEPARTMENT OF SCIENCE AND TECHNOLOGY IN THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI BACHI SINGH RAWAT): (a) to (c) The Department of Science and Technology (DST) organised a Brainstorming session on Monsoon 2002 in Bangalore on 28-29 November, 2002 to discuss the causes of failure of this year's summer monsoon in the country. In this session, several Scientists from India Meteorological Department, Indian Institute of Tropical Meteorology, Pune, National Centre for Medium Range Weather Forecasting, New Delhi, Space Applications Centre, Ahmedabad, Indian Institute of Technology (IIT) New Delhi, Centre for Mathematical Modelling and Computer Simulation (CMMACS), Cochin University, Andhra University and the Indian Institute of Science, Bangalore, participated.

The monsoon season of 2002 in which the all-India monsoon rainfall was in deficit by 19% has turned out to be an intriguing season. None of the methods developed for empirical prediction, which have been reasonably successful for over a decade could predict this drought. The predictions given in May 2002, on the basis of complex atmospheric/climate models by the leading global centres, also did not suggest a drought over India. The focus of the meeting was on this monsoon season of 2002 with a particular emphasis on July 2002 in which an unprecedented deficit of 49% was observed. Observations from India and global data were discussed in detail. Empirical predictions for the season as well as July were discussed and possible modifications of the models, for better predictions of the season and July 2002 were also discussed.